7.6.5 Efficiency Standards for Walk-in Coolers and Walk-in Freezers (1)

Doors

Units must have automatic door closers that firmly close all walk-in doors with widths at or under 3 ft, 9 in and heights at or under 7 ft that have been closed to within 1 inch of full closure.

Units must have strip doors, spring hinged doors, or another method of minimizing infiltration when doors are open.

Insulation (2)

Coolers must have wall, ceiling, and door insulation of at least R-25.

Freezers must have wall, ceiling, and door insulation of at least R-32.

Freezer floor insulation must be at least R-28

Motors

Elevator Fan Motors less than 1 horsepower and less than 460 volts:

-Must be Electronically commutated motors (brushless direct current motors) or 3-phase motors.

Condenser fan motors under 1 horsepower:

-Must be electronically commutated motors (brushless direct current motors) or

-permanent split capacitor-type motors or

-3-phase motors.

Interior Lights

All interior lights should use light sources of 40 lumens/watt or more, including any ballast losses, however:

-Light sources with an efficacy of 40 lumens per watt or less, including ballast losses (if any), may be used in conjunction with a timer or device that turns off the lights less than 15 minutes after people have exited the walk-in cooler or freezer.

Transparent Reach-in Doors and Windows in Doors

Freezers:

-shall be of triple-pane glass with either heat-reflective treated glass or gas fill.

Coolers:

-shall be of double-pane glass or triple-pane glass with either heat-reflective treated glass or gas fill.

Antisweat Heat Controls

Units with an antisweat heater without antisweat heat controls:

-must have a total door rail, glass, and frame heater power draw of not more than 7.1 watts per square foot of door opening (freezers) and 3.0 watts/square foot of door opening (coolers).

If the unit has an antisweat heater and antisweat heat controls, and the frame heater power draw is greater than the amount specified above:

-the antisweat heat controls shall reduce the energy use of the antisweat heater in a quantity corresponding to the relative humidity in the air outside the door or to the condensation on the inner glass pane.

Note(s): 1) Effective for products manufactured on or after January 1, 2009. 2) Wall, ceiling, and door insulation requirements do not apply to glazed portions of doors or structural members.

Source(s): Title 10, Code of Federal Regulations, Part 431 - Energy Efficiency Program for Certain Commercial and Industrial Equipment, Subpart R - Walk-in Coolers and Walk-in Freezers. January 1, 2010.